

**INSTITUTIONAL TUNING PAF ACCEPTANCE DOCUMENT**

CEC-NRCA-LTI-05-A (Revised 01/19)

CALIFORNIA ENERGY COMMISSION



<b>CERTIFICATE OF ACCEPTANCE</b>		<b>NRCA-LTI-05-A</b>
Institutional Tuning PAF Acceptance Document		(Page 1 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

Compliance Results: <b>[COMPLIES or DOES NOT COMPLY]</b>	Enforcement Agency Use: Checked by/Date
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<b>Intent:</b>	This document is used to demonstrate compliance with acceptance requirements in <a href="#">§130.4(a)7</a> and Reference Nonresidential Appendix <a href="#">NA7.7.6.2</a> for lighting systems receiving the institutional tuning power adjustment factor (PAF). Attach additional sets of pages 1 through 2, as required, for all systems that must be tested.
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Indicate functional testing methods used for this project:	
<input type="checkbox"/>	Observation of systems during institutional tuning ( <i>Sections A and B-1 of this document should be completed</i> )
<input type="checkbox"/>	Verification of systems already tuned ( <i>Sections A and B-2 of this document should be completed</i> )

A. Construction Inspection ( <a href="#">NA7.7.6.2.1</a> )		
<input type="checkbox"/>	a.	The controls or the methods of controlling the maximum output of luminaires is such that the maximum light output of the controlled lighting system can be limited. ( <a href="#">NA7.7.6.2.1(a)</a> )
<input type="checkbox"/>	b.	The controls or the methods of controlling the maximum output of luminaires is such that normal operation of the controlled lighting does not override the maximum light output. ( <a href="#">NA7.7.6.2.1(a)</a> )
<input type="checkbox"/>	c.	The controls are not readily accessible to unauthorized personnel. ( <a href="#">NA7.7.6.2.1(b)</a> , <a href="#">§140.6(a)2Jii</a> )
Construction Inspection Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		

B-1. Functional Testing by Observation of Systems During Institutional Tuning ( <a href="#">NA7.7.6.2.2</a> )			
Building:	Floor:	Room:	Control:
<input type="checkbox"/>	Space is representative of sample. ( <a href="#">NA7.7.6.2</a> ) If sampling method is used, attach a page listing untested spaces in sample.		
Step 1: Determination of light output or maximum power prior to institutional tuning ( <a href="#">NA7.7.6.2.2, Step 1</a> ) (Current measurements may be used instead of power measurements to show power reduction.)			
a.	Set all lighting controls to provide maximum output of the tested system without applying the limits specified for institutional tuning. ( <a href="#">NA7.7.6.2.2, Step 1(a)</a> )		
b.	Measure the full light output at a location where the illuminance is due to the controlled lighting and enter the value in footcandles (fc). <b>OR</b> Measure the power of the controlled lighting and enter the value in watts (W). ( <a href="#">NA7.7.6.2.2, Step 1(b)</a> ) (If current measurements are being used, enter the measured current in amperes (A).)		
Step 2: Institutional tuning and post-tuning measurement ( <a href="#">NA7.7.6.2.2, Step 2</a> )			
c.	Apply the limits specified for institutional tuning to the lighting system. Do not alter any other control settings. ( <a href="#">NA7.7.6.2.2, Step 2(a)</a> , <a href="#">§140.6(a)2Jiii</a> )		
d.	Measure the light output at the same location as in Step 1 (line b) and enter the value in footcandles (fc). <b>OR</b> Measure the power of the same circuit as in Step 1 (line b) and enter the value in watts (W). ( <a href="#">NA7.7.6.2.2, Step 2(b)</a> ) (If current measurements are being used, enter the measured current in amperes (A).)		
e.	Calculate ratio of the light or power output of the system after institutional tuning to the light or power output of the system before institutional tuning and enter the value in %. ((line d / line b) x 100)		%
f.	The light output or power after institutional tuning is 85% or less of the light output or power before institutional tuning. (line e ≤ 85%) ( <a href="#">NA7.7.6.2.2, Step 2(c)</a> , <a href="#">§140.6(a)2Ji</a> ) Enter yes (Y) or no (N).		
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply			

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<b>B-2. Functional Testing by Verification of Systems Already Tuned (NA7.7.6.2.2)</b>			
Building:	Floor:	Room:	Control:
<input type="checkbox"/>	Space is representative of sample. (NA7.7.6.2) If sampling method is used, attach a page listing untested spaces in sample.		
Step 1: Measurement of tuned lighting system (NA7.7.6.2.2, Step 1) (Current measurements may be used instead of power measurements to show power reduction.)			
a.	Set all lighting controls except institutional tuning controls to provide maximum output of tested system. Controls set to maximum light output include but not limited to: manual dimmers, multilevel occupant sensing controls, and automatic daylighting controls. (NA7.7.6.2.2, Step 1(a), §140.6(a)2Jiii)		
b.	Measure the full light output at a location where most of the illuminance is due to the controlled lighting and enter the value in footcandles (fc). <b>OR</b> Measure the power of the controlled lighting and enter the value in watts (W). (NA7.7.6.2.2, Step 1(b)) (If current measurements are being used, enter the measured current in amperes (A).)		
Step 2: Measurement of lighting system with institutional tuning overridden (NA7.7.6.2.2, Step 2)			
c.	Reset institutional tuning controls to allow full light output. Set all lighting controls to provide maximum output of tested system including but not limited to: institutional tuning controls, manual dimmers, multilevel occupant sensing controls, and automatic daylighting controls. (NA7.7.6.2.2, Step 2(a))		
d.	Measure the full light output at the same location as in Step 1 (line b) and enter the value in footcandles (fc). <b>OR</b> Measure the power of the same circuit as in Step 1 (line b) and enter the value in watts (W). (NA7.7.6.2.2, Step 2(b)) (If current measurements are being used, enter the measured current in amperes (A).)		
e.	Calculate ratio of the light or power output of the system after institutional tuning to the light or power output of the system before institutional tuning and enter the value in %. ((line b / line d) x 100)		%
f.	The light output or power after institutional tuning is 85% or less of the light output or power before institutional tuning. (line e ≤ 85%) (NA7.7.6.2.2, Step 2(c), §140.6(a)2Ji) Enter yes (Y) or no (N).		
Step 3: If the tested system passes the test in Step 2 (line f = Y), restore institutional tuning settings. (NA7.7.6.2.2, Step 3(a))			
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply			

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<b>DOCUMENTATION AUTHOR'S DECLARATION STATEMENT</b>		
I certify that this Certificate of Acceptance documentation is accurate and complete.		
Documentation Author Name:	Documentation Author Signature:	
Documentation Author Company Name:	Date Signed:	
Address:	CEA/ATT Certification Identification (If applicable):	
City/State/Zip:	Phone:	
<b>FIELD TECHNICIAN'S DECLARATION STATEMENT</b>		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> <li>1. The information provided on this Certificate of Acceptance is true and correct.</li> <li>2. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician).</li> <li>3. The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7.</li> <li>4. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building.</li> </ol>		
Field Technician Name:	Field Technician Signature:	
Field Technician Company Name:	Position with Company (Title):	
Address:	ATT Certification Identification (if applicable):	
City/State/Zip:	Phone:	Date Signed:
<b>RESPONSIBLE PERSON'S DECLARATION STATEMENT</b>		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> <li>1. I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance.</li> <li>2. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person).</li> <li>3. The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7.</li> <li>4. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building.</li> <li>5. I will ensure that a completed, signed copy of this Certificate of Acceptance shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy.</li> </ol>		
Responsible Person Name:	Responsible Person Signature:	
Responsible Person Company Name:	Position with Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed: